REMARKS

I. Formalities

Applicant thanks the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of the certified copy of the priority document submitted on December 14, 1999.

Applicant thanks the Examiner for considering the references cited with the Information Disclosure Statement filed December 14, 1999.

Applicant thanks the Examiner for indicating that the Formal Drawings filed on January 17, 2003 are accepted.

II. Status of the Application

By the present Amendment, claims 3 and 8 have been amended to more fully define the features of the present invention. Further, claim 1 has been amended to better conform it to the English language and PTO practice. The amendments to claim 1 are not made for patentability reasons and do not narrow the scope of the claim 1. Also, claims 11-16 are hereby added to cover more fully various implementations of the invention. Claims 1-16 are all the claims pending in the Application. Claims 1-10 stand rejected.

III. Claim Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1-2, 4, 6-7, and 9 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,956,335 to Backes *et al.* (hereinafter "Backes"). Applicant respectfully traverses this rejection for the reasons set forth below.

According to the MPEP, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131. Applicant respectfully submits that claims 1-2, 4, 6-7, and 9 positively recite limitations which are not disclosed (or suggested) by Backes.

Backes discloses a means to preserve the multicast address of a frame on a first communications system having a large multicast address capability when the frame is forwarded onto a second communications system having a small multicast address capability. *See* column 2, lines 19-24. Backes also discloses a special <u>subtype</u> of multicast address, called a functional address. As disclosed in Backes, the term "functional address" refers to a specific field in the packet header (e.g., DA field 210) which serves as an indicator, or a self-describing feature, to indicate that a multicast address must be recovered from information stored within the frame (e.g., from the encapsulated multicast address). *See* column 5, lines 9-20.

A. Independent Claim 1

With respect to claim 1, the grounds of rejection allege that the multicast address and the functional address, as disclosed in Backes, correspond to address data of <u>different</u> address formats, as recited in Applicant's claim 1. In particular, the grounds of rejection allege that, as disclosed in Backes, the multicast address and the functional address correspond, respectively, to first address data conforming to a first network and second address data conforming to a second network of a <u>different</u> address format, as recited in claim 1.

Applicant respectfully disagrees with the grounds of rejection. First, Applicant submits that, as understood by one of ordinary skill in the art, functional addresses are nothing more than a special <u>subtype</u> of multicast addresses, which are indicated by a bit in the packet header.

Therefore, because functional addresses are simply a subtype of multicast addresses, the

multicast address and the functional address disclosed in Backes do not correspond to address

data of different address formats, as required by claim 1. Rather, the functional address in

Backes is a subtype of the same address format with respect to the multicast address.

Consequently, Backes fails to disclose or suggest that the multicast address and the functional

address disclosed therein correspond, respectively, to first address data conforming to a first

network and second address data conforming to a second network of a different address format,

as recited in claim 1.

Second, Applicant submits that Backes does not disclose or suggest that the functional

address disclosed therein corresponds to second address data conforming to a second network, as

recited in claim 1. Indeed, as disclosed in Backes, the functional address itself is never used for

routing purposes in any network and, thus, does not conform to any network. To the contrary,

the functional address disclosed in Backes is used only as an indicator, or a self-describing

feature, to indicate that a multicast address must be recovered from information stored within the

frame (e.g., from the encapsulated multicast address). *See* column 5, lines 9-20. Specifically,

Backes discloses that, for example, when the frame is being forwarded from a first network with

a large multicast address capability, onto a second IEEE 802.5 token ring local area network,

which has a small multicast address capability, the data address DA field 210 is chosen as one of

the functional addresses and is reserved to always indicate that a multicast address must be

recovered from information stored within the frame. *See* column 5, lines 14-20. Further, after

the frame is received by a receiving station of a third network, the additional information stored

8

within the frame enables a third network to recover the multicast address. *See* column 3, lines 34-40.

However, Backes does <u>not</u> disclose that the functional address itself is used for routing purposes within—and thereby conforms to—the second IEEE 802.5 token ring local area network. In fact, Backes discloses quite the opposite—that the functional address is used only as an indicator to a field holding the information needed to recover the original multicast address. *See* column 5, lines 11-13. Thus, because Backes fails to disclose or suggest that the functional address itself is used for routing purposes in <u>any</u> network, Backes does not disclose, and is incapable of suggesting, second <u>address</u> data conforming to a second network, as recited in claim 1.

Third, Applicant respectfully submits that Backes does not disclose or suggest <u>rewriting</u> the multicast address (which the grounds of rejection allege to correspond to first address data, as recited in claim 1) <u>with</u> the functional address (which the grounds of rejection allege to correspond to second address data, as recited in claim 1). In contrast, as shown in Figure 2, Backes discloses that Bridge 150 forwards a frame—originating from station 250 on LAN 130— from LAN 134, which is an IEEE 802.5 token ring with small multicast address capability, to LAN 152, which is an IEEE 802.3 Ethernet LAN with large multicast address capability. *See* column 7, lines column 7, lines 37-49. Further, Backes discloses that the frame on LAN 134— the frame that is forwarded to Bridge 150—is self-describing (i.e., the frame contains both a multicast address in field 104 and a functional address in DA field 102). *See* column 7, lines 44-47.

Thus, Backes discloses that Bridge 150 analyzes the self-describing frame (i.e., the functional address in DA field 102) in order to learn the desired multicast address before transmitting the frame onto LAN 152.[1] *See* column 7, lines 50-53. Backes discloses that, then, Bridge 150 writes the desired multicast address into the DA field 102 (thus replacing the functional address previously located in DA field 102) of the MAC header before Bridge 150 transmits the frame onto LAN 152. Consequently, the frame transmitted onto LAN 152 does not contain both the multicast address and the functional address, rather this "third frame" disclosed in Backes contains the multicast address alone. Hence, Backes does not disclose or suggest that Bridge 150 rewrites the multicast address with the functional address. Accordingly, Backes does not disclose, and is incapable of suggesting, rewriting said first address data with said second address data, as required by claim 1.

As a result, two-way communication (e.g., between LAN 134 and LAN 152 in the example discussed above) is impossible according to the system disclosed in Backes. As recited in claim 1, however, the first address data and the second address data are rewritten between the packet header and the auxiliary header before transmitting the packet to the second network. Thus, the second network can use both the first address data and the second address data to return a packet to the first network by inserting the second address data and the first address data, respectively, between the packet header and the auxiliary header.

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[1] Applicant notes that Backes misleadingly refers to this process as "translating" the multicast address from the functional address. *See e.g.,* column 8, lines 39-41. However, this "translating" process, as disclosed in Backes, more accurately comprises the functional address in DA field 210 indicating to the receiving station that a multicast address must be recovered from information stored within the frame. *See* column 5, lines 11-19.

Thus, Applicant respectfully submits that independent claim 1 is not anticipated by (i.e., is not readable on) Backes *at least* for these reasons. Further, Applicant respectfully submits that the dependent claims 2-5 are allowable over Backes *at least* by virtue of their dependency on claim 1.

Accordingly, Applicant respectfully requests that the Examiner withdraw this rejection.

B.   Independent Claim 6

For *at least* reasons analogous to those discussed above with respect to claim 1, Backes fails to disclose or suggest a receiving means for receiving first address data conforming to a first network and second address data conforming to a second network of a <u>different</u> address format, as recited in claim 6. Similarly, for *at least* reasons analogous to those discussed above with respect to claim 1, Backes also fails to disclose or suggest a control means for <u>rewriting</u> said first address data <u>with</u> said second address data, as recited in claim 6.

Thus, Applicant respectfully submits that independent claim 6 is not anticipated by (i.e., is not readable on) Backes *at least* for these reasons. Further, Applicant respectfully submits that the dependent claims 7-10 are allowable over Backes *at least* by virtue of their dependency on claim 6.

Accordingly, Applicant respectfully requests that the Examiner withdraw this rejection.

IV.   Claim Rejections under 35 U.S.C. § 103

The Examiner has rejected claims 3, 5, 8, and 10 under 35 U.S.C. § 103(a) as being unpatentable over Backes as applied to claims 1-6 above, and further in view of U.S. Patent No. 4,897,841 to Gang (hereinafter "Gang"). Applicant respectfully traverses this rejection for the reasons set forth below.

In order for the Examiner to maintain a rejection under 35 U.S.C. § 103, Backes, Gang, or some combination thereof, must teach or suggest <u>all</u> the limitations of claims 3, 5, 8, and 10. Applicant respectfully submits that neither Backes, Gang, nor any combination thereof, teaches or suggests all of the limitations of claims 3, 5, 8, and 10.

Claims 3, 5, 8, and 10 incorporate all the novel and non-obvious features of their base claims 1 and 6. As explained above, claims 1 and 6 positively recite limitations which are not disclosed (or suggested) by Backes. Furthermore, Gang does not cure the deficient teachings of Backes. For instance, Gang does not teach or suggest first address data conforming to a first network and second address data conforming to a second network of a <u>different</u> address format, or <u>rewriting</u> first address data <u>with</u> second address data, as recited in claim 1. Additionally, Gang fails to teach or suggest a receiving means for receiving first address data conforming to a first network and second address data conforming to a second network of a <u>different</u> address format, or a control means for rewriting first address data with second address data, as recited in claim 6. Therefore, dependent claims 3, 5, 8, and 10 would not have been obvious from Backes, Gang, or any combination thereof, for *at least* these reasons.

Thus, Applicant submits that claims 3, 5, 8, and 10 are patentable over Backes, Gang, and any combination thereof, *at least* by virtue of their dependency on claims 1 and 6. Accordingly, Applicant respectfully requests that the Examiner withdraw thus rejection.

V.   **Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the
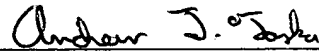
Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Andrew J. Taska
Registration No. 54,666

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

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